ZooKeys 277: 109–113 (2013)
doi: 10.3897/zookeys.277.4273
www.zookeys.org

SHORT COMMUNICATION

A peer-reviewed open-access journal
ZooKeys
Launched to accelerate biodiversity research

Nomenclatural changes in Cicadellidae: Typhlocybinae and Delphacidae (Homoptera)

Dmitry A. Dmitriev[1], Stuart H. McKamey[2]

1 *Illinois Natural History Survey, Prairie Research Institute, University of Illinois at Urbana-Champaign, 1816 S. Oak st., Champaign, IL 61820, USA* **2** *USDA/ARS Systematic Entomology Laboratory, c/o National Museum of Natural History, MRC-168, Smithsonian Institution, 10th St. & Constitution Ave., PO Box 37012, Washington, DC 20013-7012*

Corresponding author: *Dmitry A. Dmitriev* (dmitriev@inhs.uiuc.edu)

Academic editor: *M. Webb* | Received 8 November 2012 | Accepted 20 February 2013 | Published 15 March 2013

Citation: Dmitriev DA, McKamey SH (2013) Nomenclatural changes in Cicadellidae: Typhlocybinae and Delphacidae (Homoptera). ZooKeys 277: 109–113. doi: 10.3897/zookeys.277.4273

Abstract

New replacement names are proposed for seven species of the subfamily Typhlocybinae; one new synonym is recognized in the family Delphacidae. The following changes are proposed: *Empoasca* (*Empoasca*) *angustata* **nom.nov.** for *Empoasca angusta* Linnavuori & DeLong (not Dworakowska); *Empoasca* (*Empoasca*) *chilensis* **nom.nov.** for *Empoasca diversa* Linnavuori & DeLong (not Vilbaste); *Austroasca verdensis* **nom. nov.** for *Empoasca artemisiae* Lindberg (not Lethierry); *Kropka vidanoi* Dworakowska for *Erythroneura unipunctata* Dlabola (not Cerutti); *Zyginella vietnamica* **nom. nov.** for *Zyginella melichari* Dworakowska (not Kirkaldy); *Eupteryx* (*Eupteryx*) *dlabolai* **nom. nov.** for *Eupteryx octonotata* Dlabola (not Hardy); *Baaora ahmedi* **nom. nov.** for *Baaora spinosa* (Ahmed) (not Beamer); *Paradelphacodes insolitus* Dmitriev is synonymized with *Paradelphacodes gvosdevi* (Mitjaev), **syn. nov.**

Keywords

Typhlocybinae, Delphacidae, leafhopper, planthopper, systematics, homonym, synonym

Introduction

Use of the 3i software package (Dmitriev 2006) helped to reveal several junior homonyms in the leafhopper subfamily Typhlocybinae, which need publication of replacement names. The nomenclatural changes proposed in this paper are necessary to bring

Copyright *D.A. Dmitriev, S.H. McKamey*. This is an open access article distributed under the terms of the Creative Commons Attribution License 3.0 (CC-BY), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

the classification of the subfamily Typhlocybinae into compliance with the International Code of Zoological Nomenclature (ICZN 1999). In addition, a new synonym in the family Delphacidae is recognized.

Nomenclatural changes and notes

Family Cicadellidae
Subfamily Typhlocybinae

***Empoasca (Empoasca) angustata* nomen novum** for *Empoasca angusta* Linnavuori & DeLong

E. angusta Linnavuori & DeLong, 1977:17, described from Chile, is a junior primary homonym of *Empoasca* (*Buhria*) *angusta* Dworakowska, 1976:26, described from Cameroon.

Etymology: The original species name in modified spelling is used.

***Empoasca* (*Empoasca*) *chilensis* nomen novum** for *Empoasca diversa* Linnavuori & DeLong

E. diversa Linnavuori & DeLong, 1977:179, described from Chile, is a junior primary homonym of *Empoasca* (*Matsumurasca*) *diversa* Vilbaste, 1968:87, an eastern Palaearctic and Oriental species.

Etymology: The species is named for the country, from which it was originally described.

***Austroasca verdensis* nomen novum** for *Empoasca artemisiae* Lindberg

Austroasca artemisiae (Lindberg), Dworakowska 1970b: 712
Empoasca artemisiae Lindberg, 1958: 208, described from Cape Verde, is a junior primary homonym of *Empoasca artemisiae* Haupt, 1924:294 (= *Austroasca vittata* (Lethierry, 1884:65)), a wide spread Palaearctic and Oriental species.

Etymology: The species named for the country of the original description.

***Kropka vidanoi* Dworakowska, 1970a: 619 nomen revived**

= *Erythroneura unipunctata* Dlabola, 1957:119
E. unipunctata Dlabola, described from southern Europe, is a junior primary homonym of *E. tithide* var. *unipunctata* Cerutti, 1939:85 (= *Zygina* (*Zygina*) *tithide* Ferrari, 1882:159), another European species. Dworakowska (1981) recognized *Kropka vidanoi* Dworakowska as junior synonym of *Kropka unipunctata* (Dlabola). We restore *K. vidanoi* Dworakowska as a valid name for the species.

***Zyginella vietnamica* nomen novum** for *Zyginella melichari* Dworakowska

Z. melichari Dworakowska, 1977:24, described from Vietnam, is a junior secondary homonym of *Z. melichari* (Kirkaldy, 1906:315, *Eupteryx*), a species known from Sri Lanka.

Etymology: The species is named for the country, from which it was originally described.

***Eupteryx* (*Eupteryx*) *dlabolai* nomen novum** for *Eupteryx* (*Eupteryx*) *octonotata* Dlabola

E. octonotata Dlabola, 1974:51, described from Iran, is a junior secondary homonym of *E. octonotata* (Hardy, 1850:419, *Typhlocyba*) (= *Eupteryx* (*Eupteryx*) *urticae* (Fabricius, 1803: 77)), a wide spread Palaearctic species.

Etymology: The species is named for the author of the replaced name.

***Baaora ahmedi* nomen novum** for *Typhlocyba spinosa* Ahmed

Baaora spinosa (Ahmed), Dworakowska, 1982:104
T. spinosa Ahmed, 1971:195, described from Pakistan, is a junior primary homonym of *Empoa* (*Empoa*) *spinosa* (Beamer, 1943:131, *Typhlocyba*), a wide spread Nearctic species.

Etymology: The species is named for the author of the replaced name.

***Typhlocyba rubrasvulva* var. *bifasciata* Osborn, 1898:12 nom.nud.**

The name is a primary homonym of *Zonocyba bifasciata* (Boheman, 1851:212) (Original genus *Typhlocyba*). However, the name does not need a replacement, since it is not available.

Family Delphacidae

***Paradelphacodes gvosdevi* (Mitjaev, 1980)**

Chloriona gvosdevi Mitjaev, 1980: 36
Paradelphacodes gvosdevi Mitjaev, 2002: 104
= Para*delphacodes insolitus* Dmitriev, 2000: 281 **syn.n.**

Dmitriev (2002) described *Paradelphacodes insolitus* from Southern Russia, not far from the type locality of the *C. gvosdevi* Mitjaev in Northern Kazakhstan. In 2002, Mitjaev compared his material to the illustrations of Dmitriev (2000) and transferred *C. gvosdevi* Mitjaev to the genus *Paradelphacodes* without formally synonymizing both species. In this paper the synonymy of the two species is confirmed.

Acknowledgements

This work was partially supported by the National Science Foundation grants (DEB 0315373, DEB-050529679, and DEB-0715499).

References

Ahmed M (1971) Study of new genus and some species of *Typhlocyba* Germar (Typhlocybini: Cicadellidae) in West Pakistan. J. Sci. Karachi Univ. 1(1): 190–202.

Beamer RH (1943) Some new species of *Typhlocyba* (Homoptera, Cicadellidae). Canadian Entomologist 75: 131–133. doi: 10.4039/Ent75131-7

Boheman CH (1851) Iakttagelser rörande några insekt-arters metamorfos. Öfv. Svenska Vet. Akad. Förh. 1850: 211–215.

Cerutti CN (1939) Les Typhlocybidae du Valais. Bull. Murithienne. 56: 81–95.

Dlabola J (1957) The problem of the genus *Delphacodes* and *Calligypona*, three new species and other Czechoslovakian faunistics (Homoptera, Auchenorrhyncha). Sb. Entomol. Oddeleni natod. Mus. Praze. 31(476): 113-119.

Dlabola J (1974) Ergebnisse der Tschechoslowakisch-Iranischen entomologischen Expedition nach dem Iran 1970. Nr. 3: Homoptera, Auchenorrhyncha (1. Teil). Acta Entomol. Mus. Nat. Pragae 6: 29–73.

Dmitriev DA (2000) A new species of *Paradelphacodes* from centre of European Russia (Homoptera: Delphacidae). Zoosyst. Rossica 8(2): 281–282.

Dmitriev DA (2006) 3I, a new program for creating Internet-accessible interactive keys and taxonomic databases and its application for taxonomy of Cicadina (Homoptera). Russian Entomol. J. 15(3): 263–268.

Dworakowska I (1970a) Three new genera of Erythroneurini (Auchenorrhyncha, Cicadellidae, Typhlocybinae). Bull. Acad. Polonaise Sci. (Biol.) 18(10): 617–624.

Dworakowska I (1970b) On some genera of Typhlocybini and Empoascini (Auchenorrhyncha, Cicadellidae, Typhlocybinae). Bull. Acad. Polonaise Sci. (Biol.) 18(11), 707–716.

Dworakowska I (1976) On some Oriental and Ethiopian Typhlocybinae (Homoptera, Auchenorrhyncha, Cicadellidae). Reichenbachia 16(1): 1–51.

Dworakowska I (1977) On some Typhlocybinae from Vietnam (Homoptera: Cicadellidae). Folia Entomol. Hungarica 30(2): 9–47.

Dworakowska I (1981) On some palaearctic Erythroneurini (Auchenorrhyncha, Cicadellidae, Typhlocybinae). Bull. Acad. Polonaise Sci. (Biol.) 28(6): 371–379.

Dworakowska I (1982) Typhlocybini of Asia (Homoptera, Auchenorrhyncha, Cicadellidae). Entomol. Abh. Dresden 45(6): 99–181.

Fabricius JC (1803) Rhyngota. Systema rhyngotorum: secundum ordines, genera, species: adiectis synonymis, locis, observationibus, descriptionibus. C. Reichard, Brunsvigae. 1–101. doi: 10.5962/bhl.title.11644

Ferrari PM (1882) Cicadaria Agri Ligustici. Ann. Mus. Genova 18: 75–165.

ICZN (1999) International code of zoological nomenclature. Intern. Trust Zool. Nomenclature, London, 306 pp.

Hardy J (1850) Descriptions of some new British homopterous insects. Trans. Tyneside Nat. Club. 1: 416–431.

Haupt H (1924) Alte und neue Homoptera Mitteleuropas. Konowia 3: 285–300.

Kirkaldy GW (1906) Leaf-hoppers and their natural enemies. (Pt. IX Leaf-hoppers. Hemiptera). Bull. Hawaiian Sugar Pl. Assoc. Div. Entomol 1(9): 271–479.

Lethierry LF (1884) Additions. Rev. Entomol. 3: 62–65.

Lindberg H (1958) Hemiptera Insularum Caboverdensium. Systematik, Okologie und Kapverdischen Inseln. Ergebnisse der Zoologischen Expedition von Professor Hakan Lindberg nach den Kapverde-Inseln im Winter 1953–1954, Nr. 22. Comm. Biol. Soc. Sci. Fennica 19(1): 1–246.

Linnavuori R, DeLong, DM (1977) The leafhoppers (Homoptera: Cicadellidae) known from Chile. Brenesia 12/13: 163–267.

Mitjaev ID (1980) New species of Auchenorrhyncha (Homoptera) from Northern Kazakhstan. Izvestiya Academii Nauk KazSSR. (Biol.) 1: 36–39. [In Russian]

Mitjaev ID (2002) Fauna, Ecology and zoogeography of leafhoppers (Homoptera, Cicadinea) of Kazakhstan. Tethys Entomol. Research 5: 1–168. [In Russian]

Osborn H (1898b) Additions to the list of Hemiptera of Iowa, with descriptions of new species. Contr. Iowa State Coll. Agr. Dept. Zool. Entomol. 3: 9–24.

Vilbaste J (1968) Über die Zikadenfauna des Primorje Gebietes. Valgus, Tallinn, 178 p. [In Russian]